

IN THE CLAIMS:

1 1. (Amended) A power amplifier module which is a
2 power amplifier module using a bipolar transistor as an
3 amplifying element, wherein when a forward base current
4 produces an amount of an overcurrent exceeding a previously
5 set value, by detecting the amount of the overcurrent and
6 subtracting the amount of the overcurrent from the base
7 current, an increase in a collector current of the
8 amplifying element is restricted.

1 2. (Amended) A power amplifier module comprising:
2 a signal amplifying portion including at least a
3 bipolar transistor as an amplifying element and amplifying
4 and outputting an input signal;
5 a bias circuit for providing an idling current to the
6 signal amplifying portion; and
7 a protecting circuit constituted such that when a
8 forward base current of the bipolar transistor exceeds a
9 predetermined value, a current having an amount of
10 exceeding the predetermined value flows from the bias
11 circuit to the protecting circuit;

12 wherein by making the amount of exceeding the
13 predetermined value of the base current flow to the
14 protecting circuit, an output of the signal amplifying
15 portion is restricted to be equal to or smaller than a
16 predetermined value.

1 3. (Amended) A power amplifier module comprising:
2 a bipolar transistor for amplifying and outputting an
3 input signal; and
4 a protecting circuit for detecting that a forward base
5 current of the bipolar transistor exceeds a predetermined
6 value and subtracting a detected amount of exceeding the
7 predetermined value of the base current from the base
8 current:
9 wherein by controlling the base current of the bipolar
10 transistor by the protecting circuit, a collector current
11 of the bipolar transistor is restricted to be equal to or
12 lower than a predetermined value.

1 5. (Amended) The power amplifier module according to
2 Claim 2, wherein the bias circuit includes a current source
3 and a transistor and the transistor constitutes a current

4 mirror circuit along with another transistor connected in
5 series with the current source.

1 6. (Amended) The power amplifier module according to
2 Claim 2, wherein the protecting circuit includes a first
3 transistor, a first resistor connected to a base of the
4 first transistor, a second resistor one end of which is
5 connected to an emitter of the first transistor and another
6 end of which is connected to the first resistor, a second
7 transistor connected to a collector of the first transistor
8 and a third transistor constituting a current mirror
9 circuit along with the second transistor and connected to
10 the bias circuit.

1 12. (Amended) The power amplifier module according to
2 Claim 2, further comprising:
3 a plurality of stages of the amplifying elements
4 connected in series with each other;
5 wherein at least the amplifying element at a final
6 stage is protected by the protecting circuit.
